## MEDICAL REPORT

OF THE

## ROYAL LUNATIC ASYLUM

OF ABERDEEN,

FOR THE YEAR ENDING 31ST DECEMBER,

1871.

Aberdeen:

PRINTED BY LESLIE & RUSSELL, crown court, union street.

1872.

Digitized by the Internet Archive in 2018 with funding from Wellcome Library

## Committee of Management for 1872.

### PROVOST LESLIE, President.

BAILLIE JOHN FRASER. MR. HUGH ROSS. MR. GEORGE JAMIESON. REV. J. S. CANDLISH.

BAILLIE R. URQUHART. Mr. D. R. MORICE. Dr. WILLIAM FRASER. Dr. JAMES MARSHALL. MR. JOHN SANGSTER.
MR. WILLIAM HENDERSON.
MR. WILLIAM SHIRRES.
BAILLIE DANIEL.

REV. DR. PIRIE.
MR. GEORGE ROBB.
MR. WILLIAM ROSS.
MR. DAVID MITCHELL.

## Managers ex-Officiis.

#### WILLIAM LESLIE, LORD PROVOST, President.

	ROBERT URQUHART.
75 1711	JOHN FRASER.
Baillies	ROBERT URQUHART. JOHN FRASER. JAMES ROSS. WILLIAM DANIEL.
	WILLIAM DANIEL.
Dean of Guild	. Lewis Smith.
Treasurer	PATRICK COOPER.
Master of Mortifications	JAMES TULLOCH.
Dean of Guild Treasurer  Master of Mortifications Immediately preceding Provost Town Clerk Convener of Trades	ALEXANDER NICOL.
Town Clerk	JOHN ANGUS
Convener of Trades	DANIEL LAIRD
Professor of Medicine in the Abdn. University	argity JOHN MACRORIN M D
Professor of Chemistry, do	JAMES S. BRAZIER.
Moderator of the Synod of Aberdeen	REV. WILLIAM PAULL.
	. John Farley Leith.
Member of Parliament for the City.	
Member of Parliament for the County	. WILLIAM DINGWALL FORDYCE.
President of the Medico-Chirurgical Soci	lety James Corbet.
	Rev. John B. Stuart of Dens. John Webster, Advocate.
Trustees of John Burnett of Dens .	. JOHN WEBSTER, Advocate.
5'	Three Vacant.
(Principal of Abdn. Univ	ersityRev. Peter C. Campbell, D.D.
Trustees of Dr. Principal of Abdn. Univ	Rev. W. R. Pirie, D.D.
James Dun ) Eldest Minister of Aber	deen Rev. John Wilson.
Rector of Grammar Sch	nool Alexander Martin.

# Managers for Life.

٥.		~			
William Henderson, M.D.	• • •	1816	Dr. George Will	•••	27
Alexander Gibbon	•••	1834	William Garden, M.D.	•••	1865
Patrick Pirie Gordon	•••	1835	James Henderson	•••	
•		1838	T 1 3/C.		17
Alexander Johnston	• • •	1000		•••	11
William Irvine	•••	12	George Robb	•••	22
Rev. J. B. Stuart	• • •	>2	Rev. John Middleton	•••	11
John Webster	• • •	11	George Jamieson	•••	1866
Alexander Harvey, M.D,	•••		William Shirres	•••	12
		. "	William Leslie	•••	
Robert Smith	•••	1020			71
James Forbes	•••	1839	J. G. Moir Byres	•••	11
Charles Winchester	•••	22.	F. T. Garden	•••	11
James Brebner	•••	1840	Robert Rattray, M.D	•••	11
Frederick Holland	•••		James F. Hadden	•••	11
m 1 701 11 1		1841	Gavin Hadden	•••	
	•••	1011			1867
Henry L. Holland	•••	22	James Shepherd	•••	
Newell Burnett	•••	11,	John Duguid Milne	•••	1868
Alexander Innes	•••	$18\overline{4}3$	James Paull	•••	11
D. R. Morice	•••	1845	Robert Polson, M.D	•••	"
		20-0	Robert Ligertwood	•••	
Francis Edmond	•••	<b>1</b> 848	T 0 11'		22
Rev. W. R. Pirie, D.D.	•••			•••	11
William Yeats	• • •	1849	Alexander Yeats	•••	1)
Arthur Anderson, M.D.	•••	11	John Gray	•••	1869
J. Cruickshank, LL.D.	•••	1850	William Maitland	• • •	12
n . • 1 m • 1 ′			James Maitland	•••	
	•••	1852	O O T 1! .		22
William Ross	•••			•••	11
James Bryce	•••	1853	David Mitchell	•••	11
Alexander B. Whyte	•••	23	John Sangster	•••	29
Alexander Davidson	•••	12	James Jamieson	•••	22
Michie F. Anderson	•••	1854	David Carter Fraser	•••	11
			Charles Chalmers	•••	
Rev. John Davidson	•••	22	T 43		11
Andrew Robertson, M.D.	•••	"		•••	22
James Dyce Nicol, M.P.	•••	1855	Patrick H. Chalmers	• • •	1)
Thomas Innes	•••	1856	William Lunan	•••	1870
Alexander Martin, M.D.	•••	1857	George Wallace	• • •	"
י דודיו ה			John Duncan, jun	•••	11
	•••	1858	1 TO -1 TT111		
Alexander Flockhart	•••	1000		•••	11
Robert Moir	•••	27	John Innes Harper	•••	"
John Catto	•••	11	John Watt, sen	•••	11
George Walker	•••	1859	Alexander J. Kinloch	•••	27
Rev. James C. Easton	•••		A. Gordon Pirie	•••	,,
		11	T. S. Sinclair Spark	•••	1871
John Ligertwood	•••	22			
James Chalmers	•••	71	James Buyers	•••	22
John G. Chalmers	•••	12	John Morison	•••	22
Thomas Skene	•••	1860	Professor W. Pirrie	•••	22
Marianus Massie	•••	, ,	J. Sharp Henderson	• • •	11
William Fraser			George Collie	•••	77
	• • •	32	J. T. Mackenzie	•••	
John Sutherland	•••	1001	1		"
R. S. F. Spottiswood	•••	1861	James Will, M.D	•••	11
John Leslie	•••	• •	James Nisbet	• • •	22
James Fraser	•••	1862	Alexander Robertson	•••	22
R. S. Kynoch Shand	•••		Alexander Henderson	•••	17
TX7*11* T T T		22	George Anderson	•••	11
	•••	"	Dan Talan Dalala		
Alexander Pirie	•••	12		•••	"
John Stewart	•••	11	D. A. Leslie, M.D	•••	1070
John Fraser	•••	77	George Allan	•••	1872
Hardy Robinson	•••	1863	Alexander Cook	•••	22
T 1 (C24).			William J. Routledge	•••	77
	***	22	Tamas Milno		
Robert Fletcher	•••	22		•••	"
William Alexander	•••	11	James Black	•••	13
Rev. G. Tulloch, LL.D.	•••	22	LieutCol. Black	•••	"
William Duthie	•••	1864			

## Managers,

atlanagers,											
In Virtue of Annual Subscriptions.											
Robert Catto	_	363		$\operatorname{mes}$ Crom		•••	•••	1868			
Gavin Thomas Todd		,,	_	hn Gordon		•••	•••				
Sir James H. Burnett, Bar		,,		hn Cromb		•••	•••	1869			
James Aug. Sinclair		364		hn Cromb		•••	• • •	77			
James Murray, M.D	18	566	Ge	orge Mac	pherson	•••	•••	"			
Charles Duncan	•••	,,		· John Cla		•••	•••	77			
William C. Good		, ,	_	wid Stews		•••	•••	11			
J. Matthews Duncan, M.D.	) 18	367		exander E		•••	•••	11			
J. Cardno Couper	• • •	27		ne Earl of		•••	•••	1871			
John F. White	1.0	"		l. Farquh		•••	•••	11			
Hugh Hogarth	18	368		igh J. Ma		1	•••	"			
H. Gordon Wolrige	•••	"	l Ca	ptain Hog	Sarin		•••	77			
Managers	electe)	<b>d</b> 6	th	Decem	ber,	1871	- •				
Rev. G. F. I. Philip	James	s Mite	chell		Rev. J.	Ruthe	rford	, B.D.			
James Marsh	Sheri	ff Do	ve W	Tilson	John B	ulloch		,			
Alexander Hay	Willia				John M						
Dr. James Marshall	Rev.				John F	'yfe					
Dr. George Morison	Hugh										
Managers fro	rm भ	regl	rnte	eries a	nir O	hmrc	Tres				
								•			
For one year from d	ate of $Ap_{j}$	pointn	nent, n	n virtue oj .	Annuai C	ouectror	ıs.				
	•••	•	••• }	St. And	rew's Ch	urch					
	•••		ر	)							
	•••		•••	West Pa	arish Ch	urch					
Alexander Walker Rev. A. W. Brown	•••		· · ·	)							
C 4 3/C-11	••		•••	East Pa	rish Chu	rch					
Dan I C Condligh	•••		··· )	Free Ea	st Churc	h					
D Commal Clark	•••		1								
C Tamiana	•••			St. Paul	l's Churc	n					
D T.1 Allon	•••		•••								
	•••	•	,	Aberdee	en Presb	vterv					
	•••	•	•••	FILDOTACC	II I ICSO	youry					
,	•••	•	•••	ļ							
Andrew Gibb	•••	•	***	Free W	est Chur	ch					
William Henderson	•••	•	•••	<b>)</b>	7						
Rev. Alexander Yule	•••	•	***	Abordo	en Free 1	Progbs	torr				
Rev. J. Johnston Rev. Geo. Campbell	•••	•	•••	Aberdee	en riee i	Liesby	ter y				
Rev. C. M'Combie, D.D.	•••	•	•••	) )							
Rev. Geo. Hutchison, D.I		•	•••	\ Kincard	line O'N	eil Pre	sbyte	ery			
Rev. James Rust	•••	•	•••	Ellon P	resbyter	У					
Rev. Alexander Silver	•••	•	•••	)	n Presby						
Rev. W. Gordon	•••	•	•••	)		•					
Rev. J. Cruickshank, D.D.	·· ··	•	•••	Turriff	Presbyte	ery					
Rev. W. Ross J. R. Trail, M.D	•••	••	•••	} Garioch	n Presby	tery					
Rev. John Watt	•••		4	Alford	Presbyte	ery					
Rev. W. H. Gaulter	•••	• •	•••		rinity Cl						
Rev. A. Dickie	•••	••		United	Presby	terian		bytery			
Rev. James Stewart	•••	••	•••		Church,		nead				
Charles Smith	• • • •	• •	•••	Free Se	outh Chu	ırch					
Rev. John Watt	•••	••	•••	Parish	Church,	Fetter	esso				
George Paul	•••	••	•••	)	,,						
Rev. J. F. Cock	•••	• •	•••	> Deer P	resbyter	У					
Rev. James Peter		••	•••	)	igh Chu						
Rev. Henry Bell	•••	•••	•••	T. 166 II	ign Onu	1011					

### OFFICIALS.

recons

### Resident.

ROBERT JAMIESON, M.D., . Physician and Superintendent.

WM. M'GREGOR, L. R. C. P. Ed., &c. } Medical Assistants.

ALEX. FORSYTH, M.B.,

EDWARD SAVAGE, . . House Steward.

MISS ELRICK, . . . . Matron.

MRS BUTTERS . . . Ladies Companion at Elmhill House.

MISS E. JOHNSTON, . . . Housekeeper at Elmhill House.

### "Non-Resident.

## MEDICAL REPORT.

THE number of patients resident in the Royal Lunatic Asylum of Aberdeen, at the beginning of the year 1871, was four hundred and thirty-four (434).

The number of admissions during the year, was one hundred and sixty (160).

The number of removals, inclusive of deaths, was one hundred and sixty-five (165).

The gross number of patients for the year, was five hundred and ninty-four (594), and the daily average, four hundred and thirty-eight (438); so that, although the total number of inmates was not greater than that of the year before, the average number was considerably greater.

The number of females continued to be considerably in excess of males. At the close of the year, it was as 225 to 202.

The number of private patients at the date of reporting, amounts to 148, being a third of the whole: thirty-five of these being resident in Elmhill House.

The Medical results of the year 1871, have been very favourable; one hundred and forty-three (143) have been removed, and only twenty-two (22) have died. The recoveries have formed the greater bulk of

the removals. They have amounted to eighty-four (84), or to  $52\frac{1}{2}$  per cent. on the admissions, which is both above the average of this Asylum, viz., 46 per cent. and the Average of the Scottish Asylums, which, according to the last published statement of the Board of Commissioners, is 44 per cent.

Besides the large number thus discharged, not less than fifty-nine (59) others have been removed, after hope of farther important medical benefit in their cases had ceased, many of them returning to the care of relatives, and also not a few being transferred for economy to parochial guardianship. The total removals, inclusive of deaths, have more than counterbalanced the admissions, so that the Institution, in its working, has really more fulfilled its higher function of *Maison de Santè*, than its less creditable service of a place of reception and detention.

The Mortality, during 1871, was remarkably low, the number of deaths being but twenty-two (22) in all, that is to say, 5 per cent. on the mean number resident; the average mortality of the Aberdeen Asylum, being 7 per cent.; and the average of the Scottish Asylum, according to the Lunacy Commissioners' Report for 1871, being about 8\frac{3}{4} per cent. The causes of death were of a kind, speaking favourably for the sanitary condition of the house, a large proportion, nine of them, being due to affections of the nervous system, and only four to diseases of the chest, four to diseases of the abdomen, two to affections of a febrile nature, and three to debility and exhaustion.

No accident of importance, nor any circumstance of unusual character distinguishes the year's history, and, therefore, but few events fall to be specified as of interest in the ordinary routine. Two females effected

escape, and two men; but were speedily discovered and brought back. One patient managed to get lost without any object or intention, at a pic-nic. A female patient, during a state of excitement, accidentally fractured her arm. A male attendant was discharged for rough usuage of one of his charge; one for intemperance; and two for breaches of regulations.

During the year, cricket was very much practised, and various matches were played with members of the Aberdeen and other Clubs. Assemblies, dances, concerts, and dramatic entertainments, were of frequent occurrence. Many volunteers gave assistance on these occasions, for which the superintendent begs to return his thanks. Amongst these falls specially to be mentioned, Mr. J. S. M'Kay, who, about the beginning of the year, of his own accord, got up, and conducted a very excellent Instrumental Concert, being the second time he had put himself to this unrewarded trouble. Similar obligations ought long ago to have been recorded also to the West Church Choir, who have repeatedly sung with much acceptance in both houses, but particularly at Elmhill.

The Inspectors of Lunacy paid visits to the Asylum on the 11th and 12th April, and 26th August, making lengthened examination of the house, and its inmates, and reporting the result of their inquiries. They remark favourably on the low state of mortality, the liberal and judicious dietary, the constant and personal superintendence of the Establishment, the creditable quality of clothing and bedding provided for the parochial cases, the large proportion of recoveries, and the good sanitary condition of the house. They remark

unfavourably on the plain character of the furnishings the crowded condition of the day-rooms, the supposed inadequacy of the number of attendants, the roughness of demeanour, which would seem unpleasantly to distinguish the Lunacy of the District, or, at least, as it is seen in this house, the over-reduced charge made for District patients, and the want of more suitable accommodation for stores.

Such, as now briefly stated, has been the history of the Asylum during 1871. The usual statistical details will be found appended, and also a pathological supplement drawn up by Mr. M'Gregor, one of the medical assistants, who, in this department, has shown an unusual amount of scientific knowledge and zeal,

ROBERT JAMIESON, M.D.

## TABLES.

### TABLE I.

#### GENERAL RESULTS OF THE YEAR.

Patients in Asylum, 1st January, 1871.  Admitted during the year,	Males.       Females.       Total.         200       . 234       . 434         76       . 84       . 160							
Under care and treatment during the year, 276 . 318 . 594								
Removed during the year:  Recovered,								
Relieved, 17 . 22 . 39 Unimproved, 10 . 10 . 20								
Dead,								
Remaining in Asylum, 31st Dec., 1871,	$\frac{1}{202}$ . $\frac{1}{225}$ . $\frac{1}{427}$							

### TABLE II.

### RELATIVE NUMBER OF PRIVATE AND PAROCHIAL CASES.

	Males.	$\mathbf{F}$	'emales.		Total. Mai	les.	Female	s. 7	Cotal.
Private Cases in Asylum, 1st January, 1871,	79	•	73	•	152				
Do. admitted during the year,	23		28	•	51				
Total of Private Cases treat- ed during the year,					102	•	101	•	203
Parochial Cases in Asylum, 1 1st January, 1871,	121	•	161	•	282				
Do. admitted during the year,	53	•	56	•	109		•		
Total of Parochial Cases during the year,					174	•	217	•	391
Total number of Cases,					276	•	318		594
Private Cases removed during the year,	21	•	32	•	53				
Parochial do.,	51		61	9	112				
Total number of Cases re- moved during the year,					72	•	93	•	165
Private Cases remaining 31st December, 1871,	79		69	•	148				
Parochial do.,			156						
Total number of Cases	remai	nir	ng,	٠	. 202	•	225	•	427

TABLE III.

### AGE OF PATIENTS ADMITTED.

7				Males.	·		Females			Total.
From 10 to 20,			•	4		•	7			11
,, 20 to 30,	•	•	•	24			18		•	42
,, 30 to 40,	•	•	•	19			20			39
,, 40 to 50,	•		•	13			19			32
,, 50 to 60,	•	•	•	7	•	•	13	•		20
,, 60 to 70,	•	•	•	7			5			12
,, 70 to 80,	•	•		2	•	•	2			4
				76			84			160

### TABLE IV.

### CLASSIFICATION OF ADMISSIONS ACCORDING TO PLACE OF RESIDENCE.

From Aberdeen and Suburbs, ,, Aberdeenshire, ,, Distant Localities,	•	Males. 32 36 8	•	•	$\begin{array}{c} \text{Females.} \\ 45 \\ 30 \\ 9 \end{array}$	•	•	Total. 77 66 17
		76			84			160

### TABLE V.

### SOCIAL CONDITION OF PATIENTS ADMITTED.

Married, Single, Widowed,	•	•	•	•	Males. 34 39 3	 •	Females. 29 46 9	 •	Total. 63 85 12
					76		84		160

### TABLE VI.

### OCCUPATION OR STATION IN LIFE OF PATIENTS ADMITTED.

### MALES.

Brushmaker,	10 3 1 1
Butchers, 2 Merchants,	3 1 1
	1
Baker, 1 Mechanic,	1
Cattle dealers, 2 Mason,	
Confectioner, 1 Preacher,	1
Coachmaker, 1 Porter,	1
Coach-trimmer, 1 Ropemakers,	2
Coach-painter,	2
Cab-driver,	3
Clergyman, 1 Soldiers,	2
Clerk,	<b>2</b>
Crofters, 2 Shiprigger,	1
Coffee Planters, 2 Ship Masters,	<b>2</b>
Farm Servants 7   School Masters,	2
Fishermen, 5 Tailors,	2
Gardener,	6
Grocer,	
Hosier,	76
Iron Moulder,	

### FEMALES.

Bible-reader,	•	•	1 /	Wife of Bookseller, .	1
Candlemaker,	•	•	1	Wives of Farmers, .	2
Dressmakers,			3	.,, Labourers, .	3
French Polisher,		•	1	Wife of Watchman, .	l
Hawker, .			1	,, Hawker, .	1
Millworker,			1	,, Stone Polisher, .	1
Paperworker,			1	,, Custom House Officer,	1
Ragstorer,	•		1	,, Farm Servant, .	]
Sempstresses,		•	2	,, Yarn Winder, .	1
Servants, .	•		17	No Occupation, 39	)
Shop Girls,		•	2	-	-
Widow of Blacks	mith,		1	Total, $\cdot$ 8	4
Wife of Baker.			1		

#### TABLE VII.

### COMPLICATION OF CASES ADMITTED WITH DISEASED IMPULSE.

Suicidal Imp	oulse, with	Dementia, Melancholia, Mania, .	•	Males. 1 2 2	Females. 0 5 0	Total. 1 7 2
				5	5	10

### TABLE VIII.

#### NATURE OF CAUSES ASSIGNED.

Causes Assignable, in				•	about 53 per cent.
Hereditary Predisposition, in	•	•	•	•	,, 23,
Moral Cause,	•	•	•	•	,, 4 ,,
Physical Exciting Cause, .	•	•	•		,, 25

### TABLE IX.

#### FORM OF INSANITY IN CASES ADMITTED.

							Males.	Females.	Total.
Amentia, .		•	•	•	•	•	1	2	3
Dementia,,							16	8	24
Mania							<b>37</b>	51	88
Melancholia,	•	•					10	16	26
	•	•	•	•	•	•	_	7	19
Monomania,	•	•	•	•	•	•	12	•	10
					,			h	
							76	84	160

## TABLE X.

### COMPLICATIONS OF CASES ADMITTED WITH NERVOUS DISEASES.

			Males.	Females.	Total.
			0	1	l
		•	0	l	1
			0	1	1
ø			4	0	4
		•	2	0	<b>2</b>
			1	0	1
	•	•	1	0	1
			8	3	11
•	•			$egin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

### TABLE XI

### CAUSES ASSIGNED IN CASES ADMITTED.

					Males.	Females.	Total.
Age, · · ·	•	•	•	•	1,	5	0
Death of Friends,					O	3	3
Devotional Excitement, .				•	0	1	]
Disease of Brain,					8	0	8
Disappointment,					1	2	3
Hereditary Predisposition					12	24	36
Injury to Head,		•		•	1	0	$\frac{1}{10}$
The state of the s					14	2	16
					0	<b>2</b>	2
Danta wition					0	6	6
Dozzontsz					1	0	1
	•	·	·		38	39	77
No cause asssigned in,	•	•	•	•	90	00	•
					76	84	160

TABLE XII.

### CASES DISCHARGED RECOVERED.

No.	Sex.	Form of Mental Disease.	Cause of Disor	der. Residence.
]	F.	Dementia		Y. M. W. D.
$\frac{1}{2}$	F.	D L'	Hereditary	
$\bar{3}$	F.	Dementia		0 0 9 1
4.	F.	Dementia	Parturition	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
5	M.	Domontio		
6	M.	Domentia	•••	
7	F.	7.5	Internation	
8	F.	70.00	Intemperance	0 3 1 0
9	F.	7.7	Hereditary	
10	F.	Mania	II 3'4	
11	F.	3.5	Hereditary	
12	F.	3.1	Parturition	
13	F.		Hereditary	
14	F.	Mania	Intemperance	
15	F.	Mania	Hereditary	
16	F.	Mania	Hereditary	
17	F.	Mania	Intemperance	0 1 0 0
18	F.	Mania	TT	
19	F.	Mania	Hereditary	
		Mania	•••	
20	F.	Mania	•••	
21	F.	Mania		
22	F.	Mania	Parturition	
23	F.	Mania	•••	
24	F.	Mania	•••	
25	F.	Mania	••• •••	-
26	F.	Mania	•••	
27	F.	Mania		
28	F.	Mania	Hereditary	
29	F.	Mania	•••	1 1 2 4
30	F.	Mania		0  2  1  3
31	F.	Mania		0 3 1 4
32	F.	Mania	Hereditary	0 3 0 1
33	F.	Mania	Parturition	$\cdots \mid 0 \mid 2 \mid 2 \mid 0$
34	F.	Mania	•••	0  1  2  5
35	F.	Mania		$\dots$ 1 0 2 2
36	F.	Mania	Hereditary	1 0 0 3
37	M.	Mania	Hereditary	1 3 2 5
38	M.	Mania	Hereditary	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
39	M.	<u>M</u> ania	Hereditary	0 10 0 0
10	M.	Mania		0 3 0 0
1	M.	Mania	Hereditary	0 6 3 0
2	M.	Mania	Intemperance	0 3 3 1
13	M.	Mania		0  5  3  3
4	M.	Mania	Intemperance	0  1  0  2
$5 \mid$	M.	Mania		
6	M.	Mania	Intemperance	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
7	M.	Mania	Intemperance	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

### CASES DISCHARGED RECOVERED.

### Continued.

No.	Sex.	Form of Mental Disease.		Cause of Disorder.			Resi	$\mathbf{den}_{\mathbf{c}}$	ee.
48	M.	Mania	•••	Intemperance	• • •	y. 0	м. 4	w. 1	D. 0
49	$\mathbf{M}$ .	Mania	• • •	Intemperance	•••	0	5	2	3
50	M.	Mania	•••	Hereditary	• • •	0	ì	3	5
51	M.	Mania		Intemperance	•••	0	$\tilde{3}$	0	Ö
52	$\mathbf{M}_{\cdot}$	Mania	•••		•••	i	11	4	ĭ
53	M.	Mania	• • •	Intemperance	•••	0	2	0	$\tilde{4}$
54	$\mathbf{M}_{\cdot}$	Mania	• • •	Sorrow	•••	0	ĩ	4	$\bar{2}$
55	M.	Mania	•••	Hereditary	•••	0	3	ī	5
56	$\mathbf{M}$ .	Mania	•••	Hereditary	•••	0	4	$\overline{4}$	2
57	M.	Mania	•••		•••	0	$\overline{4}$	ī	6
58	M.	Mánia	•••	Intemperance	••	0	3	Õ	2
59	$\mathbf{M}$ .	Mania	•••	Intemperance	•••	Ŏ	ĭ	ĭ	5
60	M.	Mania	•••	Cerebral Disease	•••	0	$\tilde{0}$	$\tilde{2}$	6
61	$\mathbf{M}$ .	Mania	•••	Intemperance	•••	Ŏ	$\overset{\circ}{2}$	ī	ő
$6\overline{2}$	M.	Mania	•••	Intemperance	•••	ŏ	$\bar{2}$	$\tilde{2}$	ĭ
$\frac{63}{63}$	F.	Melancholia	•••		•••	ő	5	ī	$\overline{4}$
64	F.	Melancholia	•••	Amenorrhea	•••	ő	$\overset{\circ}{2}$	Ô	2
65	F.	Melancholia	•••		•••	ő		2	4
$\frac{66}{66}$	F.	Melancholia	•••	Death of Husband	•••	ő	8 2	2 3	5
$\frac{67}{67}$	F.	Melancholia	•••	Hereditary	•••	ľ	8	ì	1
68	F.	Melancholia	•••	Hereditary	•••	ō	8	3	0
69	F.	Melancholia	•••	Desertion of Husbane		0	5	$\frac{0}{2}$	3
70	F.	Melancholia	••	Disappointed love		ő	4	3	3
71	F.	Melancholia			•••	o	6	i	2
$\frac{1}{72}$	F.	Melancholia	• • •	Hereditary	• •	ő	3	2	ī
$\frac{72}{73}$	F.	Melancholia	• • •	· ·	•••	0	$\frac{3}{2}$	$\frac{2}{3}$	5
74	$\dot{\mathbf{M}}$	Melancholia	•••	Disappointed love	•••	0	3	2	5
75	M.	Melancholia		Poverty		0	6	$\frac{2}{2}$	$\frac{3}{2}$
$\frac{76}{76}$	M.	Melancholia	•••	•	•••	0	2	3	6
	M.	Melancholia	•••	Hanaditanz	•••	0	7	2	3
77	M.	Melancholia	• • •	T., J	• • •	0	5	0	4
78	M.	Melancholia Melancholia	•••	TT 1 L	•••	0	1	2	6
$\frac{79}{20}$	M.	Melancholia  Melancholia	• • •	TT 111	•••	0	1	4	0
80		Monomania	• • •	•	•••	_	$\frac{1}{2}$	3	2
81	F.		• • •	•••	•••	0	$\frac{2}{2}$	3	
$\frac{82}{2}$	F.	Monomania	•••	•••	• • •	0	2 5	2	6
83	M.	Monomania	• • •	•••	•••	$\begin{vmatrix} 0 \\ 1 \end{vmatrix}$			0
84	M.	Monomania	•••	•••	• • •	1	4	2	1

Cerebral Disease and Bronchitis. Chorea and Sloughing Sores. Causes of Deaths. Phlebitis and Gangrene. General Paralysis. Chronic Gastritis. Chronic Gastritis. Cerebral Disease. Heart Disease. Apoplexy. Heart Disease. Exhaustion. Exhaustion. Apoplexy. Cerebritis. Erysipelas. Exhausion Apoplexy. Diarrhea. Diarrhea. Paralysis. Phthisis. Phthisis. Duration of Resid. 0 CV ಣ က က က 10 1871. Amentia. Average duration of Residence..... Hereditary ..... Old Age.... Hereditary..... Hereditary ..... Hereditary Hereditary ..... Cerebral disease..... Pregnancy..... TABLE XIII Monomania. N Causes of Disorder. DEATHS Melancholia.... Dementia ..... Mania.... Mania. Mania..... Melancholia..... Dementia ..... Dementia ..... Mania..... Mania..... Mania. Mania..... Mania. Mania.... Mania.... Mania.... Mania Dementia..... Dementia..... Dementia ..... Form of Mental Disorder. Age. 45.6854 Average Age, Sex. No. 

 ${\rm TABLE\ XIV}.$  Results, at present date, of admissions of last 48 Years.

Year.	Admitted.	Recovered.	Relieved, &c.	Dead.	Remaining 31st Dec., 1871.
1800-24. 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871	563 52 41 36 32 46 59 33 33 42 50 42 41 43 53 74 48 56 51 71 74 93 67 95 83 81 69 85 95 107 65 61 103 84 102 84 78 104 88 116 111 148 148 150 160 160 160 160 160 160 160 16	23 22 15 16 16 30 13 15 19 19 22 17 17 23 36 25 21 19 35 30 45 26 43 41 36 34 38 48 27 34 57 32 40 30 43 55 49 60 58 51 76 60 51 76 60 51 76 60 51 60 51 60 51 60 60 60 60 60 60 60 60 60 60 60 60 60	$\begin{array}{c} 19 \\ 11 \\ 13 \\ 9 \\ 18 \\ 12 \\ 7 \\ 6 \\ 14 \\ 25 \\ 8 \\ 13 \\ 12 \\ 11 \\ 18 \\ 11 \\ 16 \\ 17 \\ 19 \\ 25 \\ 24 \\ 24 \\ 25 \\ 23 \\ 25 \\ 17 \\ 28 \\ 29 \\ 27 \\ 18 \\ 16 \\ 22 \\ 23 \\ 28 \\ 25 \\ 18 \\ 24 \\ 21 \\ 29 \\ 36 \\ 39 \\ 34 \\ 41 \\ 38 \\ 20 \\ \end{array}$	$\begin{array}{c} 117 \\ 9 \\ 8 \\ 8 \\ 5 \\ 12 \\ 17 \\ 13 \\ 11 \\ 9 \\ 6 \\ 9 \\ 10 \\ 14 \\ 18 \\ 17 \\ 11 \\ 13 \\ 15 \\ 16 \\ 23 \\ 15 \\ 22 \\ 16 \\ 13 \\ 25 \\ 13 \\ 8 \\ 7 \\ 19 \\ 22 \\ 19 \\ 12 \\ 15 \\ 10 \\ 20 \\ 13 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 11 \\ 14 \\ 6 \\ 13 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 20 \\ 17 \\ 21 \\ 10 \\ 20 \\ 20 \\ 20 \\ 20 \\ 20 \\ 20$	$\begin{array}{c} 1 \\ 1 \\ 0 \\ 0 \\ 0 \\ 2 \\ 0 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 3 \\ 1 \\ 0 \\ 0 \\ 3 \\ 1 \\ 0 \\ 1 \\ 3 \\ 1 \\ 6 \\ 2 \\ 2 \\ 3 \\ 1 \\ 2 \\ 5 \\ 3 \\ 5 \\ 5 \\ 3 \\ 5 \\ 5 \\ 3 \\ 5 \\ 5$
· ·	4341	3	3132	782	441

TABLE XV.

GENERAL RESULTS OF THE LAST 42 YEARS.

Year.	Mean Number	Sed.	å.			Recovered		
	Resident.		Recovered.	Dead.	Recovered per Cent. to Ad-missions.	per Cent. to mean No. Resident.	Deaths per Cent. to Ad- missions.	Deaths per Cent. to mean No. Resident.
1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1868 1869 1870 1871 Sum and	102 100 106 107 114 116 169 113 124 140 144 150 152 167 183 200 213 222 229 230 245 263 280 245 263 280 245 263 280 281 274 291 299 295 307 308 318 323 340 346 362 369 391 410 420 423 438	59 33 33 42 50 42 41 43 53 74 48 56 51 71 74 93 67 95 83 81 69 85 95 107 65 61 103 84 102 84 108 108 108 108 108 108 108 108	27 14 15 23 16 20 24 16 20 26 28 30 41 29 40 47 36 32 42 54 39 31 44 50 39 42 32 48 48 55 55 66 73 65 55 68 84	8 12 10 14 6 11 5 8 14 10 19 10 11 12 7 13 12 23 17 16 17 20 18 21 19 9 20 21 15 9 20 21 15 9 20 21 15 22 19 20 22 25 23 31 22 26 22 26 22 676	45·77 42·42 45·45 54·76 32·00 47·61 58·53 39·53 37·73 35·13 52·08 39·29 50·98 39·44 44·09 43·28 42·10 57·31 43·36 46·37 37·64 44·21 50·46 60·00 50·82 42·72 59·52 38·23 50·00 41·02 46·15 54·54 42·96 43·96 60·36 44·59 50·69 49·24 32·73 45·33 52·50	26·57 14·00 14·15 21·51 14·91 18·10 22·02 14·16 16·13 18·57 17·36 14·66 17·10 17·18 16·39 20·05 13·14 18·02 20·52 15·70 13·91 13·06 15·97 19·28 13·87 11·31 15·12 16·79 13·22 13·59 10·39 15·09 14·86 16·17 14·45 18·51 17·88 18·67 15·85 13·09 16·07 19·17	13·56 36·36 30·30 33·33 12·00 26·19 12·19 18·60 26·41 13·51 39·51 17·86 21·57 16·90 9·46 13·98 17·91 24·21 20·73 19·27 24·91 23·53 18·94 17·75 29·23 14·75 19·41 25·00 14·70 10·71 28·29 18·27 22·74 17·18 21·55 20·72 20·98 15·28 11·36 13·09 17·33 13·75	7:84 12:00 9:43 13:08 5:26 9:48 4:59 7:08 11:29 7:14 13:19 6:67 7:24 7:19 3:83 6:50 5:63 10:36 7:42 6:98 7:39 8:16 6:84 7:50 6:75 3:29 6:87 7:02 5:08 2:93 7:14 5:97 6:19 6:47 7:22 6:35 8:40 5:63 3:65 5:23 6:14 5:00
Average of 42 Years	243.73	85.02	39.07	16.09	46.08	16.34	20.08	7:08

### TABLE XVI.

ABSTRACT OF DAILY RETURNS—SHOWING DISTRIBUTION, &C., OF PATIENTS REMAINING IN THE ASYLUM.

	Males.	Females.	Total.
Number of Patients in the Asylum, Jan. 1, 1872,  in Front House, in Back House, in East Wing, in West Wing, in Elmhill House, in Clarkseat House, in Gate Cottage, in Mary Place House,	0 0 0	226 25 24 112  16  15 14 20	429 57 79 112 73 35 24 15 14 20
Number of Patients Sick, Jan. 1, 1872,	126	6 108 145 140	8 199 271 270

### TABLE XVII.

ARTICLES OF CLOTHING, &c., MADE AND REPAIRED FROM JANUARY, 1871, TO JANUARY, 1872.

	Made.	Repaired.		Made.	Repaired.
A warran a	365	420	Hats, Trimmed,	25	9
Aprons,	1.3	76	Jackets,	68	141
Beds, Strong,		12	Linders,	348	772
Bed Covers,	174	216	Neckerchiefs,	239	83
Bed Gowns,	$\frac{1}{24}$	43	Petticoats,	576	1130
Bed Ticks,		150	Pillow Slips,	304	337
Bolster Slips,	240	408	Pillow Ticks,	80	103
Bolster Ticks,	118	181	Quilts,	2	6
Bonnets, Trimmed,	1	14	Quilts, Strong,	•••	9
Boots, Pairs,	1.0	164	Sheets,	327	568
Caps, Day	111	116	Shifts,	498	342
Caps, Cloth,		$\overline{64}$	Shirts,	143	280
Caps, Night,		70	Shoes, Pairs,	218	300
Carpets,		13	Slip Bodies,		57
Coats,	4.0	64	Stays,		24
Collars,	00	49	Stockings, Pairs,	360	5376
Counterpanes,	~~	23	Table Cloths,		32
1) rawers,	- 00	1298	Towels,		125
Dresses, Strong,		68	Tray Cloths,		8
Gowns,	100	507	Trousers,	57	860
Habitshirts,	_	16	Vests,	52	500
Handkerchiefs,		53	Window Blinds,	24	15
1101101101101101101			Wrappers		37

## CAPITAL ACCOUNT OF THE

For the Year endin

	Amount at 31st March, 1871.	Decrease During the year.	Increase during the year.	Amount at 31st March, 1872.
To Debts due by Asylum:— Legacy by George Hogg, Mortification by John Burnett, Loans, Bank Current Account, Gas Company, Income Tax,	£ s. d. 1,600 0 0 263 0 4 16,300 0 0 381 1 6 72 7 10 8 11 2	£ s. d 6 10 8 72 9 10 0 6 3	£ s. d 1,899 4 6	£ s. d. 1,600 0 0 256 9 8 16,300 0 0 2,280 6 0  8 4 11
Amount of Debt,	18,625 2 10 34,769 7 11 	79 6 9	1,899 4 6 724 5 11	
,	53,394 10 9	79 6 9	2,623 10 5	55,938 14 50

## LUNATIC ASYLUM, ABERDEEN

30th March, 1872.

		Amount 31st Mar 1871.		Decrease during the year.	2	Increa During Yea	the	Amor 31st N 18		
,,	Asylum Buildings and Fround, Written off Buildings for deterioration for year, Elmhill Buildings and Ground, Written off Buildings for deterioration for year, Household Furniture, Written off for deterio-	£ s. 32,596 10 16,160 14 3,135 7	0		6 0 8	£ 8			s. 0	d. 6
;;	ration for year, \\ New Furniture added, \\ Stores in hand, \\ Board of Patients to \\ recover, \\ Susan Elrick, Matron, \\ in hand, \\ Euphemia Johnstone, \\ Housekeeper,inhand, \\ Gilcomston Feus, \\ Asylum Extension— \\ Builders'to Account, \\ Broadford Burn,	736 3 86 15 10 0 5 0 368 0 296 0  53,394 10	10 0 0 0 0 0	10 0 5 0  376 11	0 0 2	119 66 172  2,215 347 2,920		368 2,511 347 55,938	3  0 5 14	8 5 0 6 3 5

W. CARNIE, Treasurer.

JAMES TYTLER, C.A., Auditor.

EXPENDITURE.	ey,	saries, 433 8 saries, 722 0 saries, 735 1 s, and Porter, 227 18 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	100 0 0 200 0 0 10 10 0 81 5 0 70 0 0	Attendants, House Tradesmen, Apothecary, Assistant Clerk, Barber, Officer, and Servants' Wages, 1,126 11 9  Repairs and Additions to Furniture, 259 12 3  Do. do. Building, 196 14 10	100 100 100 100 100	134 17 727 12 ,963 18	Excess of Income above Expenditure, 724 5 11
INCOME.	Patients' Board, £12,586 19 3 Produce of Ground, £12,586 19 8 Joiners' Work, 6 18 6 Shoemakers' ditto, 61 12 6	Endowments— Bedlam Fund, £30 0 0 Gilcomston Feu-duties 14 5 8 Chalmer's Bequest, 30 0 0 74 5 8						

### PATHOLOGICAL APPENDIX.

--

In this appendix, an attempt has been made to give a brief report of the Post Mortem appearances in certain cases examined during the year 1871. A short statement of the condition of the patient, prior to death, is prefixed to the Pathological Report.

Case I. H. M. A. 31.—A married female, was admitted on the 25th April, 1871, in a state of acute mania. About five or six months after admission, her appearance was observed to simulate pregnancy, but she menstruated regularly. In the beginning of November she began to refuse food, and became extremely thin and anæmic, the abdomen having the appearance of advanced pregnancy. She was reported to pass her water freely, but on introducing the Catheter, a large amount of urine was drawn off, and the abdominal tumour subsided. She died a few days after, without any return of the distension.

The surface of the brain, was covered by a layer of gelatinous serum, situated below the arachnoid, and most abundant in the vicinity of large veins; general wasting of the convolutions; white matter, very firm, with few puncta vasculosa; numerous small transparent serous cysts in the choroid plexuses. The urinary bladder was empty, but was about equal in bulk to a feetal head; its walls were rigid, about half-an-inch thick, and on the mucous surface presented numerous ridges like the musculi pectinati of the heart.

The greater part of the thickening was due to a proliferation of the connective tissue, and mostly on the outside of the wall of the viscus; the ridges were composed of a large bundle of muscular fibre cells, that exceeded in size those from the healthy bladder.

Case II. A. S., 47.—Was admitted in 1868, in the early stage of general paralysis. The disease progressed slowly, and up to the 13th December, 1871, he was able to go about and to feed himself, but on that day, it was noticed that he was very dull, and that there were slight twitchings of the muscles over the left side of the body, with partial loss of voluntary control and reflex irritability. He said that the left side was burning hot; temperature in the left axilla  $100\frac{1}{2}$  deg., in the right  $101\frac{1}{2}$  deg.; the twitchings got more severe, and voluntary control less, and catarrhal bronchitis setting in very acutely, he died comatose two days after.

The body was plump and fat; calvarium firmly adherent to the dura mater by pacchionian bodies; large serous effusion between the visceral arachnoid and brain; veins on the surface of the cerebrum very large and full of dark blood; convolutions flat and wasted; brain substance very tough and of firm consistence. In each lateral ventricle about six drachms of serum; choroid plexuses studded with small serons cysts; pineal gland about twice the natural size, and full of calcareous granules.

In the pia mater covering the under surface of the anterior lobe of the cerebrum, on the right side were numerous small white bodies exactly like miliary tubercles; a few on the corresponding part the opposite side, and a few on the anterior border of the middle lobe of the right side.

Anterior and superior parts of both lungs emphysematous, posteriorly gorged with blood, but crepitant. Left supra renal capsule much smaller than the right, and very granular and friable. All the abdominal viscera congested. Left ventricular wall thickened slightly.

The white tubercle like bodies on the surface of the brain, consisted of starved shrivelled cells, with fatty granules.

Case III. W. L. 63.—Admitted in 1858, labouring under maniacal excitement, with sensorial illusions. He was twice discharged as recovered, and re-admitted after short intervals, with a return of the previous symptoms. In December, 1871, it was noticed that he was very short of breath, and that his legs and feet were swollen. Physical examination indicated emphysema of the lungs, bronchitis, and pleuritic effusion on the lower part of the right plural sac; no disease of the heart or kidneys. After a few days he died.

On removing the calvarium, a large clot of recently effused blood was found between it and the dura mater over the posterior and middle lobes of the right cerebrum. All the vessels of the brain were congested much, except those in the part under the clot.

Below the visceral arachnoid there were patches of serous effusion here and there; remarkable deposit of pigment in the pia mater of the medulla oblongata. Numerous small cysts in the choroid plexuses.

On the anterior margin of both lungs were numerous emphysematous vesicles, each about as large as a marble; left pleura adherent except the anterior third; upper part of right adherent behind, but about one pint of straw-coloured serum encysted at the lower part: the pleura forming the wall of this sac, was covered by shreds of white lymph, which were easily removed, shewing the surface of the pleura below it to be velvety and pink in appearance. The smaller bronchi were full of mucopurulent secretion. Heart slightly hypertrophied. Liver congested; 65 calculi in the gall bladder, many of them resembling in appearance the bones of the human carpus. The colon presented several strictures, the intervening parts being greatly distended; the most remarkable stricture was at the middle of the descending colon, it barely admitted a finger; the sigmoid flexure was larger than the stomach, and turned up so as to displace the latter into the right hypochondrium. The left suprarenal capsule was remarkably congested, and its cortical part about half the thickness of that of the right, which was healthy. Kidneys flabby, about normal size. The external ears were each about one inch thick, and consisted of cartilaginous tissue, with irregular deposit of calcareous salts.

Case IV., A. W. R., 31.—Admitted in 1857 in a maniacal condition; recovered, went out, and was re-admitted in 1858. About the middle of November, 1871, symptoms of phthisis were well marked; pulse kept about 110; temperature in the morning, about 99 deg., and at night, about  $101\frac{1}{2}$  deg.; respirations 25 to 30; emaciation extreme. Died, 22nd December, 1871.

In the visceral arachnoid, were many small white granules, most numerous near the superior longitudinal sinus; subarachnoid spaces distended with serum, veins deeply congested; general wasting of the convolutions; about one ounce of serum in each lateral ventricle; in right choroid plexus, a single serous cyst, about two-fifths of an inch in diameter. Both pleural cavities completely obliterated; left lung of a dark red colour, with numerous small cavities full of a dark brown granular debris; the intervening parts were crepitant, but studded with white firm miliary tubercles that could be lifted out entire; they were visible in the right lung also, but in much smaller numbers; it contained two small cavities, one at the apex, the other in the middle lobe in front. Liver a little enlarged, of a nutmeg colour, and deeply marked by the ribs. Spleen about twice the normal size, very firm, and, when cut, like dried salmon. kidneys a little over normal weight; capsule easily separated; cortical and interpyramidal parts of a yellowish white colour, contrasting strongly with the congested pyramids. vermiformis, deeply congested, and studded with tubercles. Microscopic examination shewed that the liver, spleen, and kidneys, contained much amyloid matter.

Case V., T. B., 58.—Admitted in 1838, for maniacal excitement and spectral illusions; suffering from alternate fits of depression and excitement; he remained in the house until 29th December, 1871 when, being then in a state of excitement, and having got up to dress himself, he fell back dead on his bed.

The calvarium was with much difficulty separated from the dura mater; visceral arachnoid opaque at many parts; veins on the surface of the brain deeply congested; brain very rich in convolutions; puncta vasculosa numerous. Left pleural sac obliterated; both lungs markedly emphysematous, at anterior margin. Heart perceptibly hypertrophied, all its cavities completely empty, and its walls contracted very firmly; the wall of the left ventricle in this state was about one inch thick; valves perfect. Liver congested,

spleen about twice the normal size, but normal in colour and consistence. Kidneys about normal size; capsules easily separated, but removing small particles of the cortex; on close inspection, the cortex was seen to be covered by numerous small cysts. The colour of the kidneys was very uniform, exactly like metallic arsenic, but it was very difficult to tell where the cortical joined the medullary part.

WILLIAM M'GREGOR.